

IX. *Notes on the Butterflies described by Linnæus.* By
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[Read 21st March, 1870.]

THE appearance of Mr. Butler's valuable and long-expected "Catalogue of *Lepidoptera* described by Fabricius, in the Collection of the British Museum," has suggested to me that a list of the species described by Linnæus, with notes on the typical figures, would also be useful.

The works of Linnæus which I intend to quote, are the 11th edition of the *Systema Naturæ* (1760), which is a reprint of the 10th edition (1758); the *Fauna Suecica*, ed. 2 (1761); the *Museum Ulricæ* (1764); the *Systema Naturæ*, ed. 12, part 2 (1767), the lawful commencement of our nomenclature; and the *Mantissa Plantarum* (1771), the appendix to which contains some insects. I shall also quote the species described by Johanssen and Sparrman in the *Amœnitates Academicæ*, most of which were taken up by Linnæus in his subsequent works. For the sake of brevity, special reference will not always be given in full to each successive work.

I must remark, that the value of the figures quoted by Linnæus as illustrating his species, is usually very slight; and that much discrimination and great care is requisite to apply them properly, or they will lead us astray in almost every instance, excepting only those in which the Linnean description itself is taken from the figure quoted. In the following notes, figures quoted with doubt by Linnæus will generally not be noticed; figures verified by myself will be marked with an asterisk; and the modern genus will be added to the name of each species, except to those of the typical *Papilio*.

When I have been unable to verify doubtful references for myself, or if differences of opinion exist, the authorities for the references are pointed out. References are not quoted for European species, except in special cases.

The Linnean descriptions, as a rule, are not hard to comprehend, when you have the insect to which they refer before you; and I have no doubt that, with a little trouble, any Entomologist with a good collection before him, could easily identify most of those which I have been unable to determine.

PAPILIO.

* EQUITES TROES.

1. *P. Priamus* (ORNITHOPTERA). Linnæus quotes two figures, * Amœn. Acad. v. t. 3, f. 203 (1760) and Clerck, t. 17. I have not Clerck at hand; but the figure in Am. Ac. seems to agree with the description, and ought, perhaps, to be considered the most typical. Even allowing for the roughness of the figure, it differs materially from Cramer's figures 23 A.B., which are usually referred to *Priamus*, especially in the spots on the underside of the hind-wing, which Linnæus describes as "round," and which are represented as scarcely larger than on the upperside, and as widely separated, while in Cramer's figure they are very large, irregularly oval in shape, and almost confluent. The green markings on both surfaces of the fore-wings also differ considerably from Cramer's figure; but as this may possibly be owing, more or less, to some inaccuracy in the drawing in the Am. Ac., I do not consider this of equal importance to the size and shape of the spots.

2. *P. Hector*. Reference, Clerck, t. 33, f. 1.

3. *P. Paris*. Linnæus quotes Knorr, Delic. t. C 3, f. 1, for this insect in 1760; and subsequently Clerck, t. 13, f. 1. Knorr's should probably be regarded as the typical figure, if it agrees with the Linnean description.

4. *P. Helenus*. Refs. Clerck, t. 13, f. 2; Ehret, Pict. t. 10; * Edwards, Birds, t. 342. Edwards' figure represents *P. Polytes*, Linn., and does not agree with the Linnean description.

5. *P. Polytes*. Ref. Clerck, t. 14, f. 1.

6. *P. Troilus*.

7. *P. Deiphobus*. Refs. Clerck, t. 25; Ehret, t. 25, f. 1; * Edw. t. 346; * Petiver, Gaz. t. 11, f. 8. Petiver's figure more probably represents one of the forms of *P. Memnon*.

8. *P. Pammon*. Refs. Clerck, t. 14, f. 2; * Rœsel, Ins. i. t. 2, f. 2, 3. Clerck's is the typical figure, as it is quoted in Mns. Ulr.

9. *P. Glaucus*. Ref. Cl. t. 24, f. 1.

10. *P. Polydorus*, Joh. Amœn. Acad. vi. p. 401. Ref. Cl. t. 33, f. 2.

11. *P. Anchises*. Refs. *Merian, Ins. Sur. t. 17; *Sloane, Jamaica, ii. t. 239, f. 19, 20; *Edw. t. 207; Ehret, t. 10; Cl. t. 29, f. 1. Here Clerck is apparently not typical, as all the other figures were quoted in 1760, before his book was published. Merian's and Edwards' neither agree with each other, nor with the Linnean description. Sloane's figure represents *P. Polydamas* (n. 12). Mr. Butler regards *P. Anchises* as *P. Arbates*, Cram., with which the description seems to agree very well (Cat. Fab. pp. 235, 236).

12. *P. Polydamas*. Typ. ref. *Mer. Ins. Sur. t. 31. The Linnean description applies to the *Polydamas* of our cabinets; but Merian's figure represents *P. Androgeos*, Cram. ♀ (*P. Polycæon*, Cr. 203, A. B.)

13. *P. Memnon*. Ref. *Pet. Gaz. t. 11, f. 8. Linnæus also quotes this figure under *Deiphobus* (n. 7).

14. *P. Agenor*. Ref. Cl. t. 15. A local form of *P. Memnon*.

15. *P. Sarpedon*.

16. *P. Æneas*. Ref. *Rœs. Ins. iv. t. 2, f. 2.

17. *P. Panthous* (ORNITHOPTERA). Refs. Cl. t. 18, 19 (= *P. Priamus*, ♀, and *P. Remus*); *Pet. Gaz. t. 2, f. 2. The reference to Petiver is incorrect; the insect is the same as that already quoted by Linnæus under *P. Deiphobus* and *P. Memnon*, viz., *Pet. Gaz. t. 11, f. 8.

18. *P. Pandarus* (DIADEMA).

19. *P. Helena* (ORNITHOPTERA). Refs. Cl. t. 22, f. 1; *Mer. Ins. Sur. t. 72. Merian's figure seems to represent *O. Pompeus*, Cram.

20. *P. Philenor*. Mant. Plant. p. 535.

21. *P. Phorbanta*. Mant. Plant. p. 535. Ref. Aubenton, Misc. t. 43, f. 1, 2.

22. *P. Ascanius*, Sparrm. Amœn. Acad. vii. p. 500, note (d). I was not able to match this insect by the description, when looking through Mr. Hewitson's collection last year.

* * EQUITES ACHIVI.

23. *P. Menelaus* (MORPHO). Refs. *Mer. Ins. Sur. t. 53; Knorr, Delic. t. C 4, f. 2; Cl. t. 21, f. 1. Merian's figure differs from Cramer's figure 21 A. B. in the number and arrangement of the spots of the underside of the hind-wing.

24. *P. Ulysses*. Ref. Cl. t. 23, f. 1.

25. *P. Agamemnon*.

26. *P. Diomedes*. The ♀ of *P. Ulysses* (n. 24).

27. *P. Patroclus* (NYCTALEMON: *Heterocera*). Ref. Cl. t. 37, f. 1.

28. *P. Pyrrhus* (NYMPHALIS). Ref. Cl. t. 25, f. 2.

29. *P. Jason* (NYMPHALIS). S. N. 1767, p. 749.

30. *P. Orontes* (NYCTALEMON). Ref. Cl. t. 26, f. 1.

31. *P. Nireus*. Ref. Cl. t. 30, f. 1.

32. *P. Philoctetes* (HÆTERA). Ref. Cl. t. 30, f. 3.

33. *P. Stelenes* (VICTORINA). Refs. *Pet. Gaz. t. 13, f. 1; *Mer. Ins. Sur. t. 11; *Sloane, Jam. ii. t. 239, f. 9, 10. Merian's figure represents *Colænis Dido*.

34. *P. Leilus* (URANIA). Typical refs. *Mer. Ins. Sur. t. 29; *Sloane, Jam. ii. t. 239, f. 11, 12; Knorr, t. C, f. 1; later refs. Cl. t. 27, f. 1; *Rœs. t. 2, f. 1. Sloane's figure, of course, represents *U. Sloanus*; and the figures of Merian and Rœsel do not quite agree with each other.

35. *P. Ajax*. Ref. *Edw. t. 34. This figure is considerably larger than *Marcellus*, Cram., which is usually referred to *P. Ajax* as a variety, and the bands are yellowish instead of white.

36. *P. Machaon*.

37. *P. Xuthus*.

38. *P. Antilochus* (vel *Anthilochus*). Ref. *Catesby, Carolina, ii. t. 83.

39. *P. Turnus*. Mant. Plant. p. 536. There is no doubt that *Turnus* is a mere synonym of *Antilochus*.

40. *P. Podalirius*. Refs. Mer. Ins. Eur. 163, t. 44; Reaum. Ins. i. t. 11, f. 3, 4; *Rœs. i. cl. ii. t. 2, f. 3, 4, &c. Linnæus was at first inclined to regard this insect as a variety of *P. Protesilaus*. The orange stripe

which he describes somewhat inaccurately thus:—"posticis subtus linea sanguinea," varies a good deal in intensity of colour in different specimens.

41. *P. Phidippus* (AMATHUSIA), Joh. Amœn. Acad. vi. p. 402. Lin. S. N. 1767, p. 752.

42. *P. Jason*. In the last edition of the *Systema*, Linnæus describes another species under the same name (n. 29, above).

43. *P. Protesilaus*. Typ. refs. *Sloane, Jam. ii. t. 239, f. 1, 2; *Mer. Ins. Sur. t. 43; *Catesby, Car. ii. t. 100; later refs. Cl. t. 27, f. 2, β ; Seba, Mus. i. t. 11, f. 2; *Edw. t. 34. Catesby's figure represents a species allied to *Marcellus*, Cram.; Edwards' is the same quoted by Linnæus for *P. Ajax* (n. 35); Sloane's figure represents a species of *Timetes*.

44. *P. Nestor* (MORPHO). Ref. *Mer. Ins. Sur. t. 9. This is considered to be the ♀ of *Morpho Menelaus* (n. 23). Some separate Cramer's *Nestor*; but it hardly seems to differ materially from Merian's figure, except in wanting one of the eyes of the underside of the hindwings, Merian representing 5, and Cramer 4 only.

45. *P. Telemachus* (MORPHO). Ref. *Mer. Ins. Sur. t. 68. Westwood (Gen. D. L. ii. p. 339) refers this species, which is very badly figured by Merian, to *Morpho Anaxibia*, Esp. ♀, with doubt. Cramer's *Telemachus* is totally different.

46. *P. Achilles* (MORPHO). Typ. refs. *Mer. Ins. Sur. t. 7; Knorr, Delic. t. C 2, f. 1, 2; later ref. Cl. t. 24, f. 2. Merian's figure does not agree with Linnæus' description, or Cramer's figures; but it almost exactly corresponds with a *Morpho* from Nicaragua in the Royal Dublin Society's collection.

47. *P. Medon* (ROMALEOSOMA), Clerck and Johanssen. Typ. ref. Cl. t. 28, f. 1. (See Butl. Proc. Zool. Soc. 1865, pp. 672, 673).

48. *P. Teucer* (CALIGO). Typ. ref. *Mer. Ins. Sur. t. 23.

49. *P. Demoleus*. Typ. ref. Ehret, t. 5; later ref. *Rœs. add. t. 1, f. 2, 3. The locality given by Linnæus (Cape of Good Hope) fixes this species.

50. *P. Idomeneus* (CALIGO). Typ. refs. *Pet. Gaz. t. 28, f. 1; *Mer. Ins. Sur. t. 60; later ref. Cl. t. 20, f. 1. Petiver's figure represents *C. Teucer* (n. 48).

51. *P. Demophon* (PREPONA). Typ. ref. Cl. t. 29, f. 2.
 52. *P. Ægisthus* (vel *Ægistus*), Joh. Am. Ac. vi. p. 401. Lin. S. N. 1767, p. 754.
 53. *P. Eurypylus* (vel *Euripylus*). Ref. Cl. t. 28, f. 2. A variety of *P. Jason*, n. 42, above.
 54. *P. Thoas*. Mant. Plant. p. 536. Refs. *Drury, i. t. 22, f. 1, 2; Auben. Misc. t. 69; Seba, t. 38, f. 6, 7. Drury's figure differs a little from Cramer's, showing a slight divergence in the direction of *P. Cinyras*, Mén.

* HELICONII.

55. *P. Apollo* (PARNASSIUS).
 56. *P. Mnemosyne* (PARNASSIUS).
 57. *P. Piera* (HÆTERA). Typ. ref. Cl. t. 36, f. 4; later refs. *Mer. Ins. Sur. t. 16, f. 1; *Rœs. add. t. 6. The two last figures do not perfectly agree, and may represent different species.
 58. *P. Aglaia* (PIERIS). S. N. 1760, p. 465; *P. Pasithoe*, S. N. 1767, p. 755.
 59. *P. Horta* (ACRÆA). Mus. Ulr. p. 234; S. N. 1767, p. 755.
 60. *P. Cepheus* (ACRÆA). S. N. 1760, p. 487; Mus. Ulr. p. 252; *P. Horta*, β , S. N. 1767, p. 755. Ref. Cl. t. 43, f. 4.
 61. *P. Terpsichore* (vel *Terpsicore*) (ACRÆA). Ref. *Pet. Gaz. t. 40, f. 4. I believe this figure is intended for *A. violæ*, which does not agree with the Linnean description: Mr. Butler refers the figure to *Horta*, and the description to *Rahira*. If he is right, *Rahira* must be sunk under *Terpsichore*, Linn.
 62. *P. Antiochus* (HELICONIUS). S. N. 1767, p. 1068. Ref. Ehret, t. 1. Mr. Butler says this figure represents *H. Clytia* (Cat. Fabr. p. 121).
 63. *P. Calliope* (STALACTIS). Ref. Cl. t. 41, f. 4.
 64. *P. Melite* (LEPTALIS), Joh. Am. Ac. vi. p. 403. Ref. Cl. t. 44, f. 5.
 65. *P. Polymnia* (MECHANITIS). Refs. *Pet. Gaz. t. 12, f. 8; *Edw. t. 175; *Rœs. iv. t. 5, f. 2.

66. *P. Mneme* (MELINÆA), Joh. Amœn. Acad. vi. p. 403. Lin. S. N. 1767, p. 756.
67. *P. Mopsus* (vel *Mopsa*). S. N. 1760, p. 487; Mus. Ulr. p. 235; *P. Mneme*, β , S. N. 1767, p. 756. This is a variety of *Polymnia*, n. 65, according to Butler, Cat. Fabr. p. 126.
68. *P. Urania* (DRUSILLA).
69. *P. Euterpe* (STALACHTIS). Ref. *Pet. Gaz. t. 4, f. 2. Petiver's figure represents a *Heliconius*.
70. *P. Thallo* (CHALCOSIA: *Heterocera*). S. N. 1767, p. 756. Ref. *Edw. t. 226. This is a *Bombyx* of the genus *Chalcosia*, subsequently redescribed by Linnæus himself as *Sphinx pectinicornis* (*lib. cit.* p. 807).
71. *P. ricini* (HELICONIUS). Refs. Ehret, t. 1; *Mer. Ins. Sur. t. 30; *Rœs. Ins. iv. t. 5, f. 1.
72. *P. psidii* (THYRIDIA). Refs. *Pet. Gaz. t. 40, f. 3; *Mer. Ins. Sur. t. 19; *Rœs. iv. t. 2, f. 3. Petiver's figure represents a moth.
73. *P. Charitonia* (HELICONIUS). Refs. *Edw. t. 80; *Sloane, Jam. ii. t. 239, f. 15, 16.
74. *P. Clio* (ITHOMIA, ERESIA, Doubl., LEPTALIS, Butl.). Ref. *Mer. Ins. Sur. t. 35. The figure does not at all agree with the Linnean description; Cramer's *Clio* (257 D. E.), however, does so fairly.
75. *P. Thalia* (ACRÆA). Ref. Cl. t. 43, f. 2.
76. *P. Ixilion*. S. N. 1760, p. 488; described by Linnæus in subsequent works as *P. Thalia*, β . Not identified, perhaps a mere synonym of the last.
77. *P. Ædea* (HETERUSIA: *Heterocera*), Clerck & Johanssen. Ref. Cl. t. 4, f. 2.
78. *P. Eurytus* (vel *Euryta*). Ref. Cl. t. 31, f. 4. The description is usually applied to an *Acræa*, and the figure to a *Diadema*; Mr. Butler (Cat. Fabr. p. 95) refers both to the latter.
79. *P. Erato* (HELICONIUS). Ref. Cl. t. 40, f. 1.
80. *P. Melpomene* (HELICONIUS). Refs. *Edw. t. 38; *Sloane, Jam. ii. t. 239, f. 25, 26; *Pet. Gaz. t. 6, f. 7; *Rœs. Ins. iv. t. 3, f. 6. Petiver's figure does not belong here; and I am very doubtful if Edwards' figure represents the true *Melpomene*, and Sloane's is also very uncertain.

81. *P. cratægi* (PIERIS).

82. *P. Doris* (HELICONIUS). Mant. Plant. p. 536. Ref. Auben. Misc. t. 71, f. 1, 2. A variety of *H. Erato* (n. 79).

* DANAI CANDIDI.

83. *P. Idea* (vel *Itea*) (HESTIA), Clerck & Johanssen. Typ. ref. Cl. t. 38, f. 1; later ref. * Edw. t. 340. Edwards' figure represents *Colias Edusa*, ♀.

84. *P. anacardii* (SALAMIS). Typ. ref. * Mer. Ins. Sur. t. 16; later ref. Cl. t. 28, f. 3. Merian's figure does not agree with the Linnean description, and represents *Hætera Piera* (n. 57, above).

85. *P. Cyrene*. S. N. 1760, p. 474. The description of this species will not agree with *Salamis anacardii*, to which it is referred, S. N. 1767, p. 758.

86. *P. brassicæ* (PIERIS).

87. *P. rapæ* (PIERIS).

88. *P. napi* (PIERIS).

89. *P. Helice* (vel *Hellica*) (PIERIS).

90. *P. sinapis* (LEUCOPHASIA).

91. *P. Monuste* (PIERIS). Stated to occur in *Barbary*. Has this species been satisfactorily determined? The *P. Monuste* of authors is an American species.

92. *P. Daplidice* (PIERIS). Ref. * Pet. Gaz. t. 1, f. 7.

93. *P. Demophile* (PIERIS), Clerck & Johanssen. Ref. Cl. t. 28, f. 4.

94. *P. Acastus* (vel *Acaste*, vel *Acasta*) (PIERIS).

95. *P. Belia* (ANTHOCHARIS). S. N. 1767, p. 760. Linnæus gives the locality of this insect as *Barbary*, which would make it *A. Douei*, ♀, with which the description also agrees, as remarked by Mr. Butler, E. M. M. v. p. 271, Cat. Fabr. p. 214.

96. *P. cardamines* (ANTHOCHARIS).

97. *P. Pyrene* (THESTIAS).

98. *P. Evippe* (ANTHOCHARIS). Typ. ref. * Pet. Gaz. t. 9, f. 10; later ref. Cl. t. 50, f. 5.

99. *P. Eupheno* (ANTHOCHARIS). S. N. 1767, p. 762. The ♂ of *A. Belia*, No. 95.

100. *P. Glaucippe* (HEBOMOIA). Typ. ref. *Edw. t. 128; later ref. Cl. t. 35, f. 1.

101. *P. Encedonia* (vel *Encedon*). Undetermined. Described in Mus. Ulr. p. 244.

102. *P. Arsalte* (vel *Ersalte*) (PYRGUS). Ref. Cl. t. 23, f. 2.

103. *P. Hyparete* (vel *Hyperate*). Ref. Cl. t. 38, f. 2, 3. Figure 3 represents *P. Cæneus* (n. 125). Linnæus describes it, Mus. Ulr. p. 247, as a variety.

104. *P. Damone*. Unrecognizable from the description.

105. *P. Helcita* (ALETIS: *Heterocera*), Clerck & Joh. Ref. Cl. t. 39, f. 4; later ref. *Edw. t. 340. Edwards's figure, which Linnæus previously referred to *Hestia Idea* (n. 83), represents *Colias Edusa*, ♀.

106. *P. Scylla* (CALLIDRYAS), Johanssen.

107. *P. Hecabe* (TERIAS). Typ. ref. *Pet. Gaz. t. 28, f. 9; later ref. *Edw. t. 253, f. 2. Mr. Butler considers Petiver's figure to represent *Terias candida*; it is certainly distinct from the species figured by Edwards, which is the true *T. Hecabe* of authors. The Linnean description would probably apply equally well to several species; it agrees better with Petiver's figure than with Edwards'; but only a reference to the type in Queen Ulrica's collection at Upsala can decide the point.

108. *P. Trite* (CALLIDRYAS).

109. *P. Pyranthe* (vel *Pyrante*) (CALLIDRYAS).

110. *P. Palæno* (COLIAS). Attributed to *C. Hyale* by some of the old authors, but apparently correctly identified at present.

111. *P. Hyale* (COLIAS). Linnæus gives eight references for this insect, five of which I have been able to consult, and all, without exception, refer indubitably to *C. Edusa*, Fabr., and all the figures represent the ♀. Many of the old authors considered the Linnean *Hyale* to be our *Edusa*; and the description is not so clear as to

decide the question beyond dispute. Prof. Westwood states (Brit. Butt. ed. 2, which I quote here and elsewhere from memory) that he has found specimens of our *Edusa* labelled *P. pteridis* in the Linnean collection; and at p. 248 of Mus. Ulr., I find a reference to such an insect, which, however, is not described in any work of Linnæus known to me.

112. *P. Electra* (vel *Electo*) (COLIAS), Joh. & Linn. Ref. *Pet. Gaz. t. 9, f. 11. Petiver's figure represents *C. Edusa*, ♂; but the locality, "Cape of Good Hope," at once fixes the Linnean species.

113. *P. Eubule* (CALLIDRYAS). Ref. *Edw. t. 304. Edwards' figure, though rough, agrees with one of Cramer's figures of his *P. Marcellina* (t. 163 C.) which Mr. Bates considers to be the ♂ of Cramer's *Eubule* (t. 120, E. F.).

114. *P. sennæ* (CALLIDRYAS). Refs. *Sloane, Jam. ii. t. 236, f. 11, 12; *Mer. Ins. Sur. t. 58. Does not appear to be distinct from *C. Eubule* (n. 113), with which it is usually associated by authors.

115. *P. Philea* (CALLIDRYAS), Joh. & Linn. Ref. *Rœs. iv. t. 3, f. 5.

116. *P. Cleopatra* (GONEPTERYX).

117. *P. rhamni* (GONEPTERYX).

118. *P. Eclipsis* (GONEPTERYX), Joh. & Linn. Ref. *Pet. Gaz. t. 10, f. 6. A fictitious species, manufactured of specimens of *G. rhamni*.

119. *P. Java* (PIERIS), Sparrm. Amœn. Acad. vii. p. 504, note (1); Lin. S. N. iii. p. 225. Appears to be identical with *P. Coronæa*, Cram., which name it will supersede.

120. *P. Canidia* (PIERIS), Sparrm. Amœn. Acad. vii. p. 504, note (n). I have little doubt that this species is identical with *P. Gliciria*, Cram., which name it supersedes.

*DANAI FESTIVI.

121. *P. Midamus* (EUPLŒA). Typ. refs. Act. Holm. 1748, t. 6, f. 1, 2; Ehret, t. 3, f. 11; later ref. *Rœs. i. t. 9. The first figure is doubtless typical; Mr. Butler states that it represents a slight variety, and that the description agrees with it.

122. *P. Niavius* (DANAUS). Ref. Cl. t. 32, f. 2.
123. *P. Zetes* (ACRÆA). Ref. Cl. t. 43, f. 1.
124. *P. Strilidore*, Joh. Am. Ac. vi. p. 405. Linnæus overlooked this species, and I have not been able to identify it.
125. *P. Caneus* (vel *Ceneus*) (PIERIS). Identified by Mr. Butler, Cat. Fabr. p. 206, with *P. Plexaris*, Don.
126. *P. Enceladus*. Apparently a species of *Euplœa*.
127. *P. Obrinus* (EPICALIA). Ref. Cl. t. 31, f. 2, 3.
128. *P. Pinthæus* (vel *Pinthous*) (LEPTALIS). See Butl. Cat. Fabr. t. 2, f. 1.
129. *P. Eribote* (vel *Eribotes*). Not identified. There are some discrepancies in the description in Mus. Ulr. which I cannot reconcile.
130. *P. Pierius* (vel *Perius*). Not identified. It appears to be allied to *Athyma Asura*, Moore, but the description will not quite suit that species.
131. *P. Plexippus* (DANAUS). Linnæus quotes only figures of the North American species, to which his description is not altogether inapplicable, though it will better apply to the Asiatic species for which it is usually taken. He also gives N. America as the locality, but adds (Mus. Ulr. p. 262) "*P. Kalm meus e China.*" It is very doubtful whether the name does not rightly belong to the American species.
132. *P. Misippus* (DIADEMA).
133. *P. Chrysippus* (DANAUS). Typ. ref. *Edw. t. 189; later ref. Schreber, t. 9, f. 11, 12.
134. *P. cassiæ* (OPSIPHANES). Typ. ref. *Mer. Ins. Sur. t. 32; later ref. Cl. t. 29, f. 3. Clerck's figure is quoted for *Drusilla Urania* (n. 68).
135. *P. sophoræ* (BRASSOLIS). Typ. ref. *Mer. Ins. Sur. t. 35; later refs. Cl. t. 35, f. 3; *Rœs. i. t. 4, f. 1, 2. Rœsel's figure more probably represents a species of *Opsiphanes*.
136. *P. Xanthus* (OPSIPHANES). Ref. Cl. t. 34, f. 1, 2.
137. *P. Philomela* (vel *Philomelus*) (YPHIMA). But not *Y. Philomela* of Hübner. The description seems to me to agree better with *Y. Baldus*, Fabr., than with any other species.

138. *P. Clytus* (EREBIA).
 139. *P. Cassus* (EREBIA).
 140. *P. Mincus* (MYCALESIS).
 141. *P. Hyperanthus* (vel *Hyperantus*) (HIPPARCHIA).
 142. *P. Aeropa* (vel *Æropus*) (SYMPHÆDRA). Ref. Cl. t. 39, f. 1.
 143. *P. Eurydice* (SATYRUS), Joh. Am. Ac. vi. p. 406.
P. Canthus, Linn. S. N. 1767, p. 768.
 144. *P. Hyperbius* (EREBIA).
 145. *P. Acontius* (EPICALIA). Mant. Plant. p. 537.
 Ref. Auben. Misc. t. 68, f. 3, 4.

* NYMPHALES GEMMATI.

146. *P. Io* (VANESSA).
 147. *P. Asterie* (JUNONIA).
 148. *P. Almanas* (JUNONIA). Typ. ref. *Edw. t. 84; later ref. *Rœs. i. t. 5, f. 3, 4. Rœsel's figure represents *J. Asterie* (n. 147).
 149. *P. Aonis* (JUNONIA).
 150. *P. Cœnone* (JUNONIA). Typ. refs. *Pet. Gaz. t. 4, f. 3; *Edw. t. 37; later refs. Ehret, t. 6; *Rœs. i. t. 3, f. 1, 2.
 151. *P. Lemonias* (JUNONIA). Linnæus quotes Clerck, who, however, does not seem to have figured this insect.
 152. *P. Orithya* (vel *Oritya*) (JUNONIA). Typ. ref. *Edw. t. 26; later ref. *Rœs. Ins. iv. t. 6, f. 2.
 153. *P. Fidia* (HIPPARCHIA). S. N. 1767, p. 770. "Habitat in Barbaria." This locality, when given by Linnæus, is generally correct. Has this species been identified beyond dispute?
 154. *P. Briseis* (HIPPARCHIA).
 155. *P. Feronia* (AGERONIA). Ref. Cl. t. 31, f. 1.
 156. *P. Mæra* (SATYRUS).
 157. *P. Megæra* (SATYRUS).
 158. *P. Ægeria* (SATYRUS).
 159. *P. Ligea* (EREBIA). Ref. Alb. t. 5, f. 1. This reference is probably incorrect.

160. *P. Atlites* (JUNONIA), Joh. Am. Ac. vi. p. 407. Linn. Mus. Ulr. p. 273; *P. Laomedea*, S. N. 1767, p. 772.

161. *P. Libye* (EUPTYCHIA).

162. *P. Galathea* (MELANARGIA).

163. *P. Semele* (HIPPARCHIA).

164. *P. Hermione* (HIPPARCHIA). Refs. *Pet. Gaz. t. 7, f. 5; *Roes. iv. t. 27, f. 3, 4. Mr. Butler refers Petiver's figure to *H. Fidia*; Roesel's certainly represents *H. Circe*; but the description does not agree with either.

165. *P. Phædra* (HIPPARCHIA). Ref. Sepp, t. 3.

166. *P. Leda* (MELANITIS). Ref. *Edw. t. 297.

167. *P. Helie* (PAPHIA). Ref. Cl. t. 34, f. 3.

168. *P. Hedonia* (JUNONIA). Ref. *Pet. Gaz. t. 39, f. 4.

169. *P. Dejanira* (vel *Deianira*) (SATYRUS). Ref. *Roes. iv. t. 33, f. 1, 2.

170. *P. Jurtina* (EPINEPHELE).

171. *P. Janira* (EPINEPHELE).

172. *P. cardui* (PYRAMEIS).

173. *P. Tulbaghia* (MENERIS).

174. *P. Pipleis* (DIADEMA). Ref. Cl. t. 26, f. 2. The ♀ of *D. Pandarus* (n. 18, above).

175. *P. Lampetia* (CIRROCHROA, ?). Ref. Cl. t. 39, f. 2.

176. *P. Iris* (APATURA). Typ. refs. *Roes. iii. t. 42; Wilkes, t. 1a, 2; later refs. Harris, Aurel. vii. t. 3, f. a—d; Sulz. t. 14, f. 86. Roesel figures *Ilia*; but Linnæus describes *Iris*. I can find no such insect figured in Rœmer's edition of Sulzer, and there are only 5 figures on plate 14. Two represent a *Prepona*, which Linnæus perhaps intended to quote.

** NYMPHALES PHALERATI.

177. *P. populi* (LIMENITIS). Refs. Cl. Act. Holm. 1753, t. 7; *Roes. Ins. iii. t. 33, f. 1, 2.

178. *P. Cydippe* (CETHOSIA), Clerck & Johanssen. Ref. Cl. t. 36, f. 1.

179. *P. Tiphus* (vel *Tipha*) (PYRRHOGYRA). Typ. ref. Cl. t. 32, f. 3; later ref. *Edw. t. 33.

180. *P. Antiopa* (VANESSA).

181. *P. polychloros* (VANESSA).
182. *P. urticæ* (VANESSA).
183. *P. C.-album* (VANESSA).
184. *P. C.-aureum* (VANESSA).
185. *P. Ariadne* (ERGOLIS), Joh. Am. Ac. vi. p. 407.
186. *P. Dirce* (GYNÆCIA).
187. *P. Butes*. S. N. 1760, p. 485, and Cl. t. 36, f. 3 ; given in Mus. Ulr. and S. N. 1767 as *P. Dirce*, β.
188. *P. jatrophae* (ANARTIA). Ref. *Mer. Ins. Sur. t. 4.
189. *P. Canace* (VANESSA). Joh. & Lin. This species is evidently identical with *Charonia*, Drury, which it will supersede.
190. *P. Amalthea* (vel *Amathea*) (ANARTIA). Ref. Cl. t. 40, f. 3.
191. *P. Atalanta* (PYRAMEIS).
192. *P. Amphinome* (AGERONIA). Ref. *Rœs. i. t. 10, f. 1, 2 ; *Mer. Ins. Sur. t. 8.
193. *P. Venilia* (ATHYMA). Ref. Cl. t. 32, f. 4.
194. *P. Alimena* (DIADEMA). Ref. Cl. t. 32, f. 1.
195. *P. Leucothoe* (ATHYMA).
196. *P. Hylas* (CYRESTIS). S. N. 1760, p. 486. Ref. Cl. t. 40, f. 4. Erroneously confounded by Linnæus with *Leucothoe* (n. 195) in his later works.
197. *P. Phærusa* (vel *Phaethusa*) (CETHOSIA). Ref. *Rœs. iv. t. 2, f. 1.
198. *P. Iphiclus* (vel *Iphicla*) (HETEROCHROA). Ref. Cl. t. 41, f. 3.
199. *P. Idmon* (vel *Idmone*). Undetermined.
200. *P. Eleus* (vel *Elea*) (HETEROCHROA).
201. *P. Ancæus* (vel *Ancæa*) (EPICALIA).
202. *P. Janassa* (ROMALEOSOMA).
203. *P. Sibilla* (LIMENITIS). S. N. 1767, p. 781. Ref. *Rœs. Ins. iii. t. 33, f. 1-3 (f. 1 & 2 represent *L. populi*). This is the *P. Prorsa* of the Mus. Ulr. p. 303.
204. *P. Camilla* (LIMENITIS). Mus. Ulr. p. 304 ; S. N. 1767, p. 781. Ref. *Pet. Gaz. t. 12, f. 10 ; later ref. *Rœs. iii. t. 33, f. 3, 4. The ♀ of *L. Sibilla*. Petiver's figure represents a totally different species.

205. *P. Amphion*. S. N. 1760, p. 486; *P. Camilla*, β, S. N. 1767, p. 781. This has nothing to do with *L. Sibilla*, and is perhaps a *Neptis*.

206. *P. Bolina* (DIADEMA). Ref. Cl. t. 21, f. 2. Mr. Butler has recently identified this species with *D. Lasi-nassa* of authors. It was formerly considered to be the ♂ of the Linnean *Misippus* (n. 132).

207. *P. Clytia*.

208. *P. Neærea* (PYRRHOGYRA). Ref. *Edw. t. 33. This figure has already been quoted under *P. Tiphus* (n. 179), to which it apparently belongs.

209. *P. Aceste* (vel *Acesta*) (CALLIZONA). Ref. Cl. t. 43, f. 3.

210. *P. Dido* (COLÆNIS), Clerck & Johanssen. Refs. Cl. t. 30, f. 2; *Mer. Ins. Sur. t. 3.

211. *P. similis* (DANAUS). Typ. ref. *Pet. Gaz. t. 92, f. 13; later ref. Cl. t. 16, f. 3. Petiver's figure does not agree with the description: it represents *D. Limniace*, Cram.

212. *P. assimilis* (HESTINA). Ref. Cl. t. 16, f. 1.

213. *P. dissimilis*. Typ. ref. Ehret, t. 17; later ref. Cl. t. 16, f. 3.

214. *P. Panope*. Ref. Rheed. mal. 9, t. 1, ?. It is still uncertain whether this and the last species are forms of *P. Clytia* (n. 207, above) or not.

215. *P. Nauplius* (vel *Nauplia*) (ERESIA). Ref. Cl. t. 46, f. 1, 2.

216. *P. Hypermnestra*, Joh. Am. Ac. vi. p. 407; Lin. S. N. 1767, p. 783. Apparently a variety of the male of *Elymnias undularis*, Dru., from which the marginal markings of the fore-wings are absent.

217. *P. Nesæa* (vel *Nesea*). Mus. Ulr. p. 302. This is probably identical with *Elymnias Lais*, Fabr.

218. *P. Rumina* (THAIS). Ref. *Catesby, Car. ii. t. 95. Linnæus quotes a description from Osbeck, which apparently applies to *Argynnis Selene*, but his own description, assisted by Catesby's figure, is perfectly clear. Drury figures *Zeritis Thero* (n. 237 below) under the name of *P. Rumina*.

219. *P. Levana* (ARASCHNIA). S. N. 1760, 1767. Ref. *Rœs. i. t. 9, f. 5, 6.

220. *P. Prorsa* (ARASCHNIA). S. N. 1760, 1767. Ref. *Rœs. i. t. 8, f. 6, 7; Mer. Ins. Eur. t. 88, f. 1. The spring brood of *A. Levana* (n. 219).

221. *P. Lucina* (NEMEOBIUS). Ref. *Pet. Gaz. t. 16, f. 10. A very rough figure.

222. *P. Matura* (MELITÆA). F. S. p. 280. Refs. *Pet. Gaz. t. i. f. 8; Wilkes, 58, t. 2, s. 9. The description certainly applies to a species belonging to the *Artemis* group of *Melitæa*, and Wallengren does not question its current application. Petiver's figure represents *Thais Rumiæ* (n. 218, above); but an insect described as very rare in Sweden, "habitat in *Corylo*, *Erica*, *Scabiosa*," will not do for a *Thais*.

223. *P. Cinxia* (MELITÆA). F. S. p. 280. Refs. *Pet. Gaz. t. 18, f. 10; *Rœs. iv. t. 13; Reaum. Ins. ii. t. 9; Wilkes, t. 3, a, b. Wallengren does not consider the identification of this species fully established (Lep. Rhop. Scand. p. 73); and the description (F. S. p. 280) is not sufficiently precise; but as both Petiver and Rœsel figure insects belonging to the *Cinxia* group of *Melitæa*, of which group this is the only Swedish representative, I see no reason for doubting the correct application of the name.

224. *P. Lena* (HÆTERA). Ref. *Rœs. i. t. 10, f. 3, 4.

225. *P. Dia* (ARGYNNIS). S. N. 1767, p. 785.

226. *P. Niphe* (ARGYNNIS). S. N. 1767, p. 785. *P. Hyperbius*, Joh. Am. Ac. vi. p. 408; ♂, *P. Argyrus*, Sparrm. † Am. Ac. vii. p. 502, note (f).

227. *P. Paphia* (ARGYNNIS).

228. *P. Cytherca* (HETEROCHROA). Ref. Cl. t. 39, f. 3.

229. *P. Aglaia* (vel *Aglaja*) (ARGYNNIS).

230. *P. Adippe* (ARGYNNIS). S. N. 1767, p. 786. *P. Cydippe*, F. S. p. 281. Some consider this species a var. of *Niobe* (n. 233, below). Stefanelli quotes these references under that species.

231. *P. Lathonia* (ARGYNNIS).

232. *P. Euphrosyne* (ARGYNNIS).

233. *P. Niobe* (ARGYNNIS).

† *P. Argyrus*, Gmel. S. N. ed. 13, p. 2248, is a species of *Nyctalemon*, near *Orontes*, and is figured by Zschach, Mus. Lesk. t. 2. f. 6 (Comp. Tr. Ent. Soc. Lond. 1869, p. 356).

234. *P. vanillæ* (AGRAULIS). Typ. refs. *Mer. Ins. Sur. t. 25; *Sloane, Jam. ii. t. 239, f. 23, 24; later ref. Cl. t. 40, f. 2.

*PLEBEJI RURALES.

235. *P. Cupido* (HELICOPIS). Refs. *Pet. Gaz. t. 10, f. 9; *Mer. Ins. Sur. t. 10, f. 1; *Roes. iv. t. 3, f. 7.

236. *P. Polybe* (THECLA), Joh. & Lin.

237. *P. Thero* (ZERITIS).

238. *P. betulæ* (THECLA).

239. *P. pruni* (THECLA). Typ. ref. *Roes. v. 2, t. 7.

240. *P. quercus* (THECLA).

241. *P. Marsyas* (THECLA). Typ. ref. Cl. t. 41, f. 1; *Edw. t. 81; later ref. *Roes. i. t. 5, f. 1, 2.

242. *P. Echion* (THECLA, ?). S. N. 1767, p. 788. Ref. *Roes. i. t. 7, f. 3, 4. Mr. Butler (Cat. Fabr. p. 188) gives a different reference, but it is correctly quoted by Linnæus, according to our copy of Roesel.

243. *P. Telamon*. Undetermined.

244. *P. Bæticus* (POLYOMMATUS).

245. *P. Thyra* (ZERITIS).

246. *P. Thysbe* (ZERITIS).

247. *P. Thamyras*. Undetermined.

248. *P. Arion* (POLYOMMATUS). Typ. ref. *Roes. iii. t. 45, f. 3, 4; later refs. Sulz. t. 14, f. 87; Poda, t. 2, f. 4. Roesel's figure seems to represent *P. Diomedes*; but this is not a Swedish insect, nor does the description (F. S. p. 833) appear to point to it. Some *Polyommata* are figured on plate 18 of Rømer's edition of Sulzer, but *Arion* is not among them.

249. *P. Zeuxo* (ZERITIS).

250. *P. Argus* and *P. Idas* (POLYOMMATUS). F. S. p. 283, united in S. N. 1767, p. 783. Wallengren is probably correct (Rhop. Scand. p. 206) in referring this species to *Ægon*, for the other critical species is a great rarity in Sweden. Linnæus says in F. S. that *Argus* is "caudatis," evidently a misprint, as it is corrected in later works.

251. *P. Philiæsus*. I suspect this insect may prove to be identical with *Polyommatus Amyntas*, Fabr., but I am not quite sure, having only short descriptions to compare.

252. *P. Argiolus* (POLYOMMATUS). Considered by some of the old writers to represent *P. Semiargus*, Rott. (*Acis*, W. V.).

253. *P. Pirithous* (POLYOMMATUS). Not improbably the ♂ of *P. Philiasus* (n. 251, above). It is *Papilio Barbarus*, Gmel. S. N. p. 2352, (see Tr. Ent. Soc. Lond. 1869, p. 360), and is fully described by Godart as *Polyommatus Pirithous*, Enc. Méth. ix. p. 682.

254. *P. Thespis* (vel *Tespis*) (POLYOMMATUS).

255. *P. rubi* (THECLA).

256. *P. Lara* (HYPOLYCÆNA ?).

257. *P. Pamphilus* (CÆNONYMPHA).

258. *P. Philocles* (MESOSEMIA). Ref. Cl. t. 45, f. 3.

259. *P. Timantes*. Undetermined.

260. *P. Arcanius* (vel *Arcania*) (CÆNONYMPHA).

261. *P. Athemon* (EUBAGIS). Ref. Cl. t. 37, f. 2, t. 46, f. 3.

262. *P. caricæ* (NYMPHIDIUM). Typ. ref. * Mer. Ins. Sur. t. 40, f. 1; later ref. Cl. t. 20, f. 2. Merian's figure is very doubtful.

263. *P. Metis* (CYCLOPIDES).

264. *P. Neleus* (PHAREUS). Ref. Cl. t. 45, f. 2.

265. *P. Talaus* (PHAREUS), Clerck & Johanssen. Ref. Cl. t. 45, f. 1.

266. *P. Phereclus* (PANARA). Ref. Cl. t. 45, f. 4.

267. *P. Peleus* (PHAREUS), Clerck & Johanssen. Ref. Cl. t. 45, f. 5.

268. *P. Lysippus* (ERYCINA). Ref. Cl. t. 22, f. 2.

269. *P. Priassus* (PHAREUS). Given by Mr. Butler (Cat. Fabr. p. 283) as the ♂ of *P. Talaus*, n. 265, above.

270. *P. Phlœas* (LYCÆNA).

271. *P. virgaureæ* (LYCÆNA).

272. *P. Hippothoe* (LYCÆNA). F. S. p. 274. Wallengren (Lep. Rhop. Scand. p. 193) thinks that this description applies to *Eurydice*, Rott., which Esper figures as the Linnean *Hippothoe*, and not to *Hippothoe*, W. V. and later authors. Prof. Westwood confirms this opinion, by stating (Brit. Butt. ed. 2) that he has found specimens of *Eurydice* ticketed *Hippothoe* in Linnæus' handwriting, in the Linnean cabinet.

273. *P. Hero* (CENONYMPHA). F. S. p. 274. Linnæus seems to have confounded this species with *C. Tiphon*, Rott. (*Davus*, Fabr.) as his description in the first edition of F. S. seems to apply to *Tiphon*; and he would hardly say of *P. Hero* "Corpus præcedenti (i. e. *P. Hippothoe*) paullo majus."

274. *P. Eryx*. Mant. Plant. p. 537. Ref. Auben. Misc. t. 71, f. 4, 5. Mr. Butler (Cat. Fabr. p. 180) gives this insect as identical with *Deudorix Amyntor*, Herbst.

275. *P. Tithonus* (EPINEPHELE). Mant. Plant. p. 537. De Villers writes the name *Tithonius*, which is copied by Staudinger and others.

**PLEBEJI URBICOLÆ.

276. *P. Comma* (PAMPHILA).

277. *P. Augias* (PAMPHILA), Joh. Am. Ac. vi. p. 410.

278. *P. Protumnus* (ZERITIS).

279. *P. Proteus*. Linnæus confounded all the species of the genus or subgenus *Goniurus* under this name. Typ. ref. *Mer. Ins. Sur. t. 63 (one of the worst figures in the book); later ref. Cl. t. 42, f. 1-3. Linnæus afterwards referred t. 42, f. 2 to the following species, but incorrectly (see *P. Thrax*).

280. *P. Thrax* (HESPERIA). S. N. 1767, p. 794. Ref. Cl. t. 42, f. 2. Mr. Butler states (Cat. Fabr. p. 262) that Clerck's figure does not belong to this species. Donovan's figure (Ins. Ind. t. 49, f. 2) is quoted for it by both Westwood and Butler.

281. *P. Butes* (ERYCINA), Cl. & Linn. Ref. Cl. t. 46, f. 6. This species is *P. Arcius*, Joh. Am. Ac. vi. t. 36, p. 409.

282. *P. Actorion* (BIA), Clerck & Johanssen. Ref. Cl. t. 36, f. 2.

283. *P. Phidias* (PYRRHOPYGA). Typ. ref. *Pet. Gaz. t. 43, f. 15; later ref. Cl. t. 44, f. 1-4. Petiver's figure represents a moth. Clerck figured two species as the sexes of one, and Linnæus copied the error in his subsequent works. (See Butl. Cat. Fabr. p. 268.)

284. *P. Bixæ*. Typ. refs. *Pet. Gaz. t. 32, f. 5; *Mer. Ins. Sur. t. 44; later ref. Cl. t. 42, f. 4. There is much confusion about this species also. Petiver's figure does not agree with the description, and Linnæus ceased to regard it as typical in his later works. Merian's figure looks over-coloured, and perhaps represents an *Eudamus* or a *Pyrrhopyga*. Clerck has figured an African species as *Bixæ*, which resembles Merian's species on the under surface; but the name must be restored to Merian's insect, as soon as it has been properly identified.

285. *P. Polycletus* (HYPOCHRYSOPS). Ref. Cl. t. 17, f. 2.

286. *P. Pitho* (POLYOMMATUS). The ♀ of *P. Thespis* (n. 254, above).

287. *P. malvæ* (PYRGUS). Typ. refs. *Pet. Gaz. t. 36, f. 6; Mer. Ins. Eur. i. t. 38; Reaum. i. t. 11, f. 6, 7; *Rœs. i. 2, t. 10; Wilkes, t. 2, c. 1; later refs. Hufn. 4, t. 2, f. ult.; Schæff. Elem. t. 94, f. 9. There is no doubt that this species is the same as *alveolus*, Hübn. Petiver's figure represents this species; Rœsel figures two different species, apparently *malvarum* and *alveus*, at the page cited. Not only does *alveolus* agree with the Linnean description, but it stands so named in the Linnean collection. (See Westw. and Humphr. Brit. Butt. p. 121). Wallengren (Lep. Rhop. Scand. pp. 275, 276) regards the question as settled, and makes special reference to all the allied Swedish species.

288. *P. Tages* (NISONIADES).

289. *P. Oileus* (PYRGUS). I have no reason to doubt that this insect is, as Linnæus states, an Algerian species; and I hope soon to have an opportunity of verifying this and the other doubtful species described by Linnæus from Algeria, as I am expecting a collection from that country.

290. *P. Niso* (NISONIADES).

291. *P. Spio* (PYRGUS).

292. *P. Phaleros* (THECLA).

293. *P. Cæneus* (NYMPHIDIUM).

294. *P. Idas*. S. N. 1760, p. 488. The description is very poor, and I cannot discover that the species is taken up in Linnæus' subsequent works. Possibly *Eudamus Brino*, Cram., but unrecognizable from the description.
